BioSystems, 26 (1992) 263–264
Elsevier Scientific Publishers Ireland Ltd.

Contents

Volume 26

MODEL SYSTEMS

Dynamics of autocatalytic reaction networks IV: inhomogeneous replicator networks
P.F. Stadler (Wien, Austria and Göttingen, Germany) 1

What is the role of predation on stability of natural communities? A theoretical investigation
A. Bodini (Parma, Italy) 21

Modeling of biological and medical systems: a systemic strategy
P. Mussio, M. Pietrogrande, F. Brambilla, C. Caserta, A. Cefalo, M. Randetti, P. Bottoni and N. Dioguardi (Milan, Italy) 31

A theoretical analysis of the effect of placental metabolism on fetal oxygenation under conditions of limited oxygen availability
L.J. Groome (Birmingham, AL) 45

BOOK REVIEW 57

CELLS

Nucleolar localization of rRNA coding sequences in *Prorocentrum micans* Ehr. (dinomastigote, kingdom Protoctist) by in situ hybridization
M.-L. Géraud, M. Herzog and M.-O. Soyer-Gobillard (Banyuls sur mer, France) 61

ORGANISMS AND POPULATIONS

Stability patterns and trophic structure in a Delaware Bay plankton community
R. Pilette, R. Sigal and J. Blamire (New York, NY; New Haven, CT; Brooklyn, NY) 75

ANALYSIS AND MODELLING

Self-similarity in biological classifications
A. Minelli, G. Fusco and S. Sartori (Padova, Italy) 89

Model for a self-repairing system of non-articulated coralline algae
T. Nakamura, Y.-P. Gunji and Y. Iryu (Kobe and Sendai, Japan) 99

Modelling fluctuation phenomena in the plasma cortisol secretion system in normal man
Y. Lenbury and P. Pacheenburawana (Bangkok, Thailand) 117

An epidemiological model for the dynamics of Chagas' disease
J.X. Velasco-Hernández (Ithaca, NY and Mexico) 127

SELF-ORGANIZATION

Self-organization toward criticality in the Game of Life
K. Ito and Y.-P. Gunji (Kobe, Japan) 135

INFORMATION PROCESSING

The analysis of distributed control and information processing in adaptive systems: a biologically motivated approach
R.R. Kampfner (Dearborn, MI) 139

ECOSYSTEMS

Distribution of neuromass in a Michigan stream ecosystem
P.C. Kangas, L. Vanover and V.A. Kimler (Ypsilanti, MI) 155

OTHER MODELS

Steady-state properties of a model ternary substrate cycle: theoretical predictions
F. Fassy, C. Renard and J.-F. Hervagault (Compiègne, France) 159

A note on Gutierrez's kinetics model for oxygen delivery to tissue
M. Sharan and S. Selvakumar (New Delhi, India) 171

A kinetic model of CD4+ lymphocytes with the human immunodeficiency virus (HIV)
J.J. Bailey, J.E. Fletcher, E.T. Chuck and R.I. Shrager (Bethesda, MD) 177

On inherited fertility in biological systems: a model of correlated fluctuations in the stochastic branching process
Y.A. Berlin, D.O. Drobnitsky, V.I. Goldanskii and V.V. Kuz'min (Moscow, Russia) 185

A discrete-time model for the spread of periodic diseases without immunity
R.E. Mickens (Atlanta, GA) 193

ANALYSIS AND MODELING OF COMPLEX BIOLOGICAL SYSTEMS

Symbiotic interactions in the EVOLVE III ecosystem model
J. O'Callaghan and M. Conrad (Detroit, MI) 199

Formation of a regular dissipative structure: a bifurcation and non-linear analysis
J. Chattopadhyay, P.K. Tapaswi and D. Mukherjee (Calcutta, India) 211

Propagation of force and the induced bending displacement along eukaryotic flagellar axoneme
E. Imai, A. Watanabe, H. Honda and K. Matsuno (Nagaoka, Japan) 223

Bone marrow regeneration under cytotoxic drug regimens: behaviour ranging from homeostasis to unpredictability in a model for hemopoietic differentiation
R. Mehr and Z. Agur ((Rehovot, Israel) 231

EVOLUTION AND PHYLOGENY

Somatic kineties or paroral membrane: which came first in ciliate evolution?
K. Eisler (Tübingen, Germany) 239

BOOK REVIEW 255

CORRIGENDUM 257

Subject Index 259
Author Index 261
Contents 263